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PATENT
Dkt. STL11422

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Robert G. Bean, Clark E. Lubbers and Randy L. Roberson**
Assignee: **SEAGATE TECHNOLOGY LLC**
Application No.: **10/669,196** Group No.: **2113**
Filed: **September 23, 2003** Examiner: **Emerson Puente**
For: **DATA RELIABILITY BIT STORAGE QUALIFIER AND LOGICAL UNIT METADATA**

Mail Stop Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**REQUEST FOR RECONSIDERATION OF PETITION TO MAKE SPECIAL
FOR NEW APPLICATION UNDER M.P.E.P. § 708.02, VIII**

1. Petition

Applicant hereby requests reconsideration of the petition to make this new application, which has not received any examination by the Examiner, special. It is submitted that all of the elements set forth in M.P.E.P. § 708.02, VIII, allegedly deficient in the first petition, are provided in the attached Request for Reconsideration of Adverse Decision Dated April 3, 2006. As directed in the Decision on Petition, this request for reconsideration is being filed within two months of the mail date of the Decision. A copy of the Decision dated 4/3/06 is attached.

2. Claims

All the claims in this case are directed to a single invention. If the Office determines that all the claims presented are not obviously directed to a single invention, then applicant will make an election without traverse as a prerequisite to the grant of special status.

3. Search

A search has been made by professional searcher in the following:

Field of search: Errors
Class/Subclasses
714/005, 006, 013, 758 and 763

A copy of the search report from Mark Spector, professional searcher, was submitted with the original petition.

4. Copy of references

All of the references most closely related to the subject matter encompassed by the claims are of record and were listed in Forms PTO/SB/08A, which were filed with the original application and Information Disclosure Statement on September 23, 2003 and the Supplemental Information Disclosure Statement which accompanied the original Petition on June 30, 2005.

5. Detailed discussion of the references

There is submitted herewith a detailed discussion of Applicant's cited references, that are deemed most closely related to the subject matter encompassed by the claims. This discussion particularly points out how the claimed subject matter is distinguishable over the cited references. References that were included in the Information Disclosure Statement or Supplemental Information Disclosure but not cited are either directed to the state of the art or are cumulative.

6. Fee

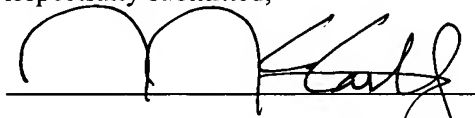
The fee required by 37 C.F.R. 1.17(h) was paid with the filing of the original petition to make special. Applicant does not believe that there are any fees due with this filing.

However, authorization is hereby made to charge our Deposit Account No. 06-0540, if a fee is in fact due at this time.

Charge any additional fees required by this paper or credit any overpayment to Deposit Account No. 06-0540. A duplicate of this paper is attached.

Date: 6/1/2004

Respectfully submitted,



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For: **DATA RELIABILITY BIT STORAGE QUALIFIER AND LOGICAL UNIT
METADATA**

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**REQUEST FOR RECONSIDERATION OF ADVERSE DECISION
ON PETITION TO MAKE SPECIAL DATED APRIL 3, 2006**

Sir:

This Request for Reconsideration of the adverse Decision mailed April 3, 2006 is based on the Applicant's compliance with all the requirements for accelerated examination. The Applicant respectfully requests reconsideration and granting of the Petition, and provides the following remarks and supplemental statements in support thereof.

Bases for Dismissal

The Petition was dismissed because MPEP §708.02(VIII)(e) was deemed to not be satisfied for the following deficiencies:

Applicant's submission of 30 June 2005 fails to meet requirement (E) as set forth above. Responsive to requirement (e), applicant must provide a "detailed discussion of the references, which discussion points out, with the particularly [sic, particularity] requirement by 37 CFR § 1.111(b) and (c), how the claimed subject matter is patentable over the references." Petitioner should ensure that the above discussion is directed to how the language of

each of the independent claims are specifically distinguishable and patentable from the references provided pursuant to requirement (e) supra.

Applicant believes the particularity requirements of 37 CFR 1.111(b) and (c) were satisfied by the Petition. In the Petition Applicant stated that no references of record teach or suggest the method of claim 1 whereby *the first information directly indicates the status of the first data*, and no references of record teach or suggest the method of claim 8 and the apparatus of claim 15 whereby *the first information indicates status of second data associated with the first data*.

Nevertheless, Applicant has supplemented the Detailed Discussion hereinbelow in satisfaction of the Examiner's stated understanding of the particularity requirements.

The embodiments of the present invention as claimed can at least be characterized without limitation by the following recited features of the independent claims:

Claim 1 (emphasis added)

A method for storing data comprising the step of storing first information with first data, wherein the first information directly indicates the status of the first data.

Claim 8 (emphasis added)

A method for protecting data comprising the step of accompanying first information with first data, wherein the first information indicates status of second data associated with the first data.

Claim 15 (emphasis added)

*An apparatus comprising:
storage areas; and
circuitry configured to perform at least one of a group consisting of a reading and a writing of the storage areas, wherein at least one of the storage areas*

*includes first information accompanying first data,
wherein the first information indicates status of second
data associated with the first data.*

Detailed Discussion of the Cited References

The present embodiments as claimed by the independent claims contemplate devices and associated methods for directly indicating the reliability of data stored in a data block by employing a data reliability indicator bit. None of the cited references disclose or teach the contemplated embodiments as claimed. There are, however, a number of references cited herein as being most closely related to the subject matter encompassed by the claims, which are now addressed individually with respect to each of the independent claims.

(1) Patentability of the Claims over Morgan '411

U.S. Patent 5,379,411, and continuation U.S. 5,574,856, issued to Morgan ("Morgan '411") disclose using a code byte to log operational events. The event log can then be queried retrospectively in order to determine at what event a data transfer error condition occurred. See, for example:

If such a data transfer is occurring, predetermined code bits of the code byte are set at step 94 providing an indication that this data transfer is occurring. In step 98, a determination is made as to whether or not this data transfer was successfully completed. If successful, at step 102, the predetermined code bits that were previously set are now reset so that no inaccurate fault indication exists in the predetermined code bits. On the other hand, if the data transfer was not successfully completed, the code bits remain set.

(Morgan '411, col. 6 lines 18-28)

Morgan '411 is wholly silent, however, regarding using a code bit prospectively as an indicator of the reliability of data stored in the same data block as the code bit, so as to preclude an operational event when the data is deemed unreliable.

More particularly regarding independent claim 1, the Applicant respectfully submits that Morgan '411 at least fails to disclose *the first information directly indicates the status of the first data* as claimed. This feature is exemplified (without limitation) such as by the illustrative data structures of FIGS. 4A and 4B and the methods of storing blocks of data illustrated by FIGS. 5 and 6 and the descriptions thereof. Since Morgan '411 fails to disclose these features, a prima facie case of anticipation cannot be substantiated under Section 102. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

The Applicant further respectfully submits that there is nothing in the art to cure the deficiency of Morgan '411 with regard to substantiating a prima facie case of obviousness under Section 103. There is no suggestion or motivation, neither in Morgan '411 nor within the knowledge of the skilled artisan, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 1. Moreover, the reference(s) must teach or suggest all the features of the claim, and the above features are not taught by Morgan '411 or other art of record. On these bases the Applicant respectfully submits that the subject matter of claim 1 is patentable over Morgan '411.

More particularly regarding independent claim 8, the Applicant respectfully submits that Morgan '411 at least fails to disclose *the first information indicates status of second data associated with the first data* as claimed. This feature is exemplified (without limitation) such as by the illustrative data structures of FIGS. 4A and 4B and the methods of storing blocks of data illustrated by FIGS. 5 and 6 and the descriptions thereof. Because Morgan '411 fails to disclose

these features, a prima facie case of anticipation cannot be substantiated under Section 102. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

The Applicant further respectfully submits that there is nothing in the art to cure the deficiency of Morgan '411 with regard to substantiating a prima facie case of obviousness under Section 103. There is no suggestion or motivation, neither in Morgan '411 nor within the knowledge of the skilled artisan, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 8. Moreover, the reference(s) must teach or suggest all the features of the claim, and the above features are not taught by Morgan '411 or other art of record. On these bases the Applicant respectfully submits that the subject matter of claim 8 is patentable over Morgan '411.

More particularly regarding independent claim 15, Morgan '411 fails to disclose *the first information indicates status of second data associated with the first data* as claimed, and thus cannot substantiate a Section 102 rejection. This feature is exemplified (without limitation) such as by the illustrative data structures of FIGS. 4A and 4B and the methods of storing blocks of data illustrated by FIGS. 5 and 6 and the descriptions thereof. Because Morgan '411 fails to disclose these features, a prima facie case of anticipation cannot be substantiated under Section 102. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

Furthermore, as above there is nothing in Morgan '411 or other art of record that teaches or suggests this feature or suggests modifying or combining references to arrive at the subject matter of claim 15. On these bases Applicant respectfully submits that the subject matter of claim 15 is patentable over Morgan '411 in view of Section 103.

For these reasons, Applicant reasonably concludes that the subject matter of claims 1-20 is patentable over Morgan '411.

(2) Patentability of the Claims over Ellis ‘858

U.S. Patent 5,504,858 issued to Ellis (“Ellis ‘858”) discloses setting metadata bits to predetermined values based on whether a data transfer operation was successful or not. The metadata bits can then be queried retrospectively, as in Morgan ‘411 above, to determine at what operational event a data transfer command failed. See, for example, in FIG. 5 and the associated description thereof that the data blocks are identified in block 34 well before the metadata bits are either cleared in block 46 or remain set in block 54 depending upon whether the write command was successful or not, respectively. Also see, for example, in FIG. 6 and the associated description thereof that the data blocks are identified in block 64 well before the metadata bits are queried in block 78 to indicate when a read command failure occurred.

Ellis ‘858 is wholly silent, however, regarding using a code bit prospectively as an indicator of the reliability of data stored in the same data block as the code bit, so as to preclude an operational event when the data is deemed unreliable.

More particularly regarding independent claim 1, the Applicant respectfully submits that Ellis ‘858 at least fails to disclose *the first information directly indicates the status of the first data* as claimed. This feature is exemplified (without limitation) such as by the illustrative data structures of FIGS. 4A and 4B and the methods of storing blocks of data illustrated by FIGS. 5 and 6 and the descriptions thereof. Since Ellis ‘858 fails to disclose these features, a prima facie case of anticipation cannot be substantiated under Section 102. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

The Applicant further respectfully submits that there is nothing in the art to cure the deficiency of Ellis ‘858 with regard to substantiating a prima facie case of obviousness under Section 103. There is no suggestion or motivation, neither in Ellis ‘858 nor within the

knowledge of the skilled artisan, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 1. Moreover, the reference(s) must teach or suggest all the features of the claim, and the above features are not taught by Ellis '858 or other art of record. On these bases the Applicant respectfully submits that the subject matter of claim 1 is patentable over Ellis '858.

More particularly regarding independent claim 8, the Applicant respectfully submits that Ellis '858 at least fails to disclose *the first information indicates status of second data associated with the first data* as claimed. This feature is exemplified (without limitation) such as by the illustrative data structures of FIGS. 4A and 4B and the methods of storing blocks of data illustrated by FIGS. 5 and 6 and the descriptions thereof. Because Ellis '858 fails to disclose these features, a prima facie case of anticipation cannot be substantiated under Section 102. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

The Applicant further respectfully submits that there is nothing in the art to cure the deficiency of Ellis '858 with regard to substantiating a prima facie case of obviousness under Section 103. There is no suggestion or motivation, neither in Ellis '858 nor within the knowledge of the skilled artisan, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 8. Moreover, the reference(s) must teach or suggest all the features of the claim, and the above features are not taught by Ellis '858 or other art of record. On these bases the Applicant respectfully submits that the subject matter of claim 8 is patentable over Ellis '858.

More particularly regarding independent claim 15, Ellis '858 fails to disclose *the first information indicates status of second data associated with the first data* as claimed, and thus cannot substantiate a Section 102 rejection. This feature is exemplified (without limitation) such

as by the illustrative data structures of FIGS. 4A and 4B and the methods of storing blocks of data illustrated by FIGS. 5 and 6 and the descriptions thereof. Because Ellis '858 fails to disclose these features, a prima facie case of anticipation cannot be substantiated under Section 102. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

Furthermore, as above there is nothing in Ellis '858 or other art of record that teaches or suggests this feature or suggests modifying or combining references to arrive at the subject matter of claim 15. On these bases Applicant respectfully submits that the subject matter of claim 15 is patentable over Ellis '858 in view of Section 103.

For these reasons, Applicant reasonably concludes that the subject matter of claims 1-20 is patentable over Ellis '858.

(3) Patentability of the Claims over Cypher '686

U.S. Patent 6,282,686 issued to Cypher ("Cypher '686") discloses assigning bits of a data block to each of a plurality of logical groups, so that at most only one bit corresponding to a component is assigned to any particular logical group. In this way, any component error can only introduce at most one bit error to a logical group. Otherwise, however, the data bits are set and used retrospectively as in Morgan '411 and Ellis '858 above.

More particularly regarding independent claim 1, the Applicant respectfully submits that Cypher '686 at least fails to disclose *the first information directly indicates the status of the first data* as claimed. This feature is exemplified (without limitation) such as by the illustrative data structures of FIGS. 4A and 4B and the methods of storing blocks of data illustrated by FIGS. 5 and 6 and the descriptions thereof. Since Cypher '686 fails to disclose these features, a prima

facie case of anticipation cannot be substantiated under Section 102. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

The Applicant further respectfully submits that there is nothing in the art to cure the deficiency of Cypher '686 with regard to substantiating a prima facie case of obviousness under Section 103. There is no suggestion or motivation, neither in Cypher '686 nor within the knowledge of the skilled artisan, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 1. Moreover, the reference(s) must teach or suggest all the features of the claim, and the above features are not taught by Cypher '686 or other art of record. On these bases the Applicant respectfully submits that the subject matter of claim 1 is patentable over Cypher '686.

More particularly regarding independent claim 8, the Applicant respectfully submits that Cypher '686 at least fails to disclose *the first information indicates status of second data associated with the first data* as claimed. This feature is exemplified (without limitation) such as by the illustrative data structures of FIGS. 4A and 4B and the methods of storing blocks of data illustrated by FIGS. 5 and 6 and the descriptions thereof. Because Cypher '686 fails to disclose these features, a prima facie case of anticipation cannot be substantiated under Section 102. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

The Applicant further respectfully submits that there is nothing in the art to cure the deficiency of Cypher '686 with regard to substantiating a prima facie case of obviousness under Section 103. There is no suggestion or motivation, neither in Cypher '686 nor within the knowledge of the skilled artisan, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 8. Moreover, the reference(s) must teach or suggest all the features of the claim, and the above features are not taught by Cypher '686 or other art of record.

On these bases the Applicant respectfully submits that the subject matter of claim 8 is patentable over Cypher '686.

More particularly regarding independent claim 15, Cypher '686 fails to disclose *the first information indicates status of second data associated with the first data* as claimed, and thus cannot substantiate a Section 102 rejection. This feature is exemplified (without limitation) such as by the illustrative data structures of FIGS. 4A and 4B and the methods of storing blocks of data illustrated by FIGS. 5 and 6 and the descriptions thereof. Because Cypher '686 fails to disclose these features, a prima facie case of anticipation cannot be substantiated under Section 102. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

Furthermore, as above there is nothing in Cypher '686 or other art of record that teaches or suggests this feature or suggests modifying or combining references to arrive at the subject matter of claim 15. On these bases Applicant respectfully submits that the subject matter of claim 15 is patentable over Cypher '686 in view of Section 103.

For these reasons, Applicant reasonably concludes that the subject matter of claims 1-20 is patentable over Cypher '686.

Conclusion

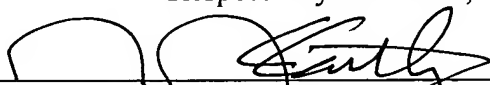
Neither the cited references nor any other references of record disclose or suggest the embodiments of the present invention as claimed. Particularly, none of the references of record disclose or suggest the novelty of the embodiments of the present invention as recited by the language of the independent claims. Furthermore, there is no motivation from the references to modify and/or combine one or more references to arrive at the embodiments of the present

invention as claimed. Accordingly, the references of record cannot sustain a Section 102 or 103 rejection.

Applicant now submits that all of the elements set forth in M.P.E.P. §708.02 subsection VIII have been provided in this Petition to afford special status. It is requested that this Petition be granted and that the examination of these claims be accelerated accordingly.

Respectfully submitted,

By:



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